

### REMARKS

Favorable reconsideration of the application is respectfully requested in light of the amendments and remarks herein.

Upon entry of this amendment, claims 2, 3, 6, 7, 9, 11 and 23-34 will be pending. By this amendment, claims 2, 3, 7, 11, 23-29 and 32 have been amended. No new matter has been added.

#### §112 Rejection of Claims 2-3

In Section 4 of the Office Action, claims 2 and 3 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 2-3 have been amended to in accordance with the Examiner's suggested language, thereby obviating this rejection.

Accordingly, it is submitted that the rejection of claims 2 and 3 based upon 35 U.S.C. §112 has been obviated and withdrawal thereof is respectfully requested.

#### § 102 Rejection of Claims 2-3, 9, 11, and 23, 25-27, 30 and 33

In Section 5 of the Office Action, claims 2-3, 9, 11, 23, and 25-27 stand rejected under 35 U.S.C. §102(e) as being anticipated by Hedin *et al.* (U.S. Patent No. 6,185,535; hereinafter referred to as "Hedin"). Claims 2-3, 11, 23 and 25-27 have been amended to address the rejection.

In the Background section of the Specification, it was disclosed that portable devices are in wide use today. The size and weight of the portable device can be reduced to increase the portability. However, the ability to significantly reduce the size of display screens and the key

input devices, such as keyboard and keypad, is somewhat limited by the portability of the devices.

To overcome the above-described shortcomings of the portable device, embodiments of the present invention provide alternative ways to select contents from a plurality of content data. For example, the structure of claim 23, as presented herein, includes:

*a portable terminal* configured to transmit input speech information to a server over a network; and

*a server* configured to receive the transmitted input speech information from said portable terminal, and to generate a contents list in response to the input speech information,

*wherein* a first contents list is generated by calculating the similarity of acoustic characteristic quantities between first input speech information and preparation information of at least one category of content corresponding to the first input speech information of each content, said server transmits input request information related to a category of content that is selected based on the result of calculating the variations of speech information of each category of content included in the first contents list, and if second input speech information is received, then the selected category of content included in the first contents list is used when calculating the similarity.

(emphasis added)

The contents selection system of claim 23 generates a first contents list, in response to the input speech information, by calculating the similarity of acoustic characteristic quantities between first input speech information and preparation information of at least one category of content corresponding to the first input speech information of each content. Furthermore, said server transmits input request information related to a category of content that is selected based on the result of calculating the variations of speech information of each category of content included in the first contents list. If second input speech information is received, then the selected category of content is used when calculating the similarity. In summary, claim 23 is

directed to contents selection system where input speech is used to find a specific content item.

In one example, every content has preparation information of at least three different categories including a title, a performer, and a genre of a song. The input speech is recognized by the speech recognition server, which can narrow the range of candidates by calculating the similarity of acoustic characteristic quantities between the specified speech information and the preparation information corresponding to the speech information. This means, for example, that if the input speech is about the title of contents, then only the title preparation information is examined during this process. The server requests the next input speech information from the portable terminal if the server fails to determine the appropriate candidate titles. When the server calculates the similarity of acoustic characteristic quantities between the speech information and the preparation information and if the server already has a contents list, then the server examines the preparation information of only those contents which are in the prior contents list. The title, the performer, and the genre speech information can be used to narrow the range of candidate songs. Using the categories and the prior contents list, the server only examines a small amount of the preparation information database so that the processing time can be efficiently reduced.

The probability of accurate recognition of the input audio information in the conventional speech recognition device is relatively low. When the input speech information is examined, the server uses the partial pattern of all of the sequence of acoustic characteristic quantities. Further, if the server does not have any prior information about the input speech, then the server must examine all patterns of the preparation information database, which will decrease the accuracy of the searching result. This will be especially true if there are similar acoustic characteristic quantities in the patterns of the preparation information in different categories. In contrast, if the server requests a specified input from a user, the server already knows the category of the input

speech. In this case, the server only needs to examine the preparation database of the specified category, thereby increasing the accuracy of the searching result.

In one example, the first requested input speech relates to a title. When a user knows the exact information about the content, the sequence of the input speech does not matter. However, a user often only knows a part of a song or wants to find songs about a particular theme/category, such as love, rain, spring, etc. After inputting an above-described information keyword related to a title of the song as a first input speech, a user can receive more information on possible candidate songs.

For example, after the result of a search using a title, certain candidates are presented to the user, for example, candidates A, B and C. Candidates A, B and C have additional information such as a genre and performer name. The additional information contains sound signals. As one example, suppose the variation of the sound signal for genre is larger than the variation for the sound signal of performer name. In this case, it will be more effective to receive genre input, because the values of difference between input information and genre sound characteristic for each candidate will be quite different in comparison with that of the performer name sound characteristic. Therefore, by receiving the genre input as second speech information the candidates can be narrowed down more quickly. *See Specification, page 36, line 2 to page 37, line 2; Fig. 3, steps 24-27.* Thus, the above-described process can provide a much more efficient way to narrow the candidate songs than using other categories, and the selected candidate songs will be relatively close to the desired songs.

Hedin uses input speech as a voice command where the server recognizes input speech and translates the input speech into a corresponding command. In contrast, the system of claim 23 recognizes the input speech as information, which can be used as a keyword for searching.

The server uses the recognized speech information to generate appropriate candidate keywords for searching. Further, to more efficiently narrow down the list of candidate names, in claim 23 a server transmits input request information related to a category of content, (e.g. genre or performer name), that is selected based on the result of calculating the variations of speech information of each category of content (e.g., performer name or genre) included in the first contents list (e.g., of possible candidates). If second input speech information is received from a user, then the selected category (e.g., performer name or genre) is used to more quickly narrow down the list of candidates.

Therefore, Hedin fails to disclose or teach generating a first contents list, in response to the input speech information, by calculating the similarity of acoustic characteristic quantities between first input speech information and preparation information of at least one category of content corresponding to the first input speech information of each content; transmitting input request information related to a category of content that is selected based on the result of calculating the variations of speech information of each category of content included in the first contents list; and using the selected category of content included in the first contents list when calculating the similarity if second input speech information is received (emphasis added).

Based on the foregoing discussion, it is maintained that claim 23 should be allowable over Hedin. Furthermore, since independent claims 25-27 closely parallel, and include substantially similar limitations as, independent claim 23, claims 25-27 should also be allowable over Hedin. Further, since claims 2-3, 9, 11, 30 and 33 depend from one of claims 23, 25, and 26, claims 2-3, 9, 11, 30 and 33 should also be allowable over Hedin.

Accordingly, it is submitted that the rejection of claims 2-3, 9, 11, 23, 25-27, 30 and 33 based upon 35 U.S.C. §102(e) has been overcome by the present remarks and withdrawal thereof

is respectfully requested.

§103 Rejection of Claims 6 and 7

In Section 6 of the Office Action, claims 6 and 7 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Hedin in view of Ladd *et al.* (U.S. Patent 6,493,671; hereinafter referred to as "Ladd"). This rejection is respectfully traversed below.

Based on the foregoing discussion regarding claim 23, and since claims 6 and 7 depend indirectly from claim 23, it is maintained that claims 6 and 7 should be allowable over Hedin.

Further, since Ladd merely discloses a markup language for interactive service to notify a user of an event and methods thereof, it is maintained that Hedin and Ladd, in combination or individually, fail to teach or suggest generating a first contents list, in response to the input speech information, by calculating the similarity of acoustic characteristic quantities between first input speech information and preparation information of at least one category of content corresponding to the first input speech information of each content; transmitting input request information related to a category of content that is selected based on the result of calculating the variations of speech information of each category of content included in the first contents list; and using the selected category of content included in the first contents list when calculating the similarity if second input speech information is received (emphasis added). Therefore, claims 6 and 7 should be allowable over the combination of Hedin and Ladd.

Accordingly, it is submitted that the rejection of claims 6 and 7 based upon 35 U.S.C. §103(a) has been overcome by the present remarks and withdrawal thereof is respectfully requested.

§103 Rejection of Claims 24, 28, 31 and 34

In Section 7 of the Office Action, claims 24, 28, 31 and 34 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Hedin in view of Milsted *et al.* (U.S. Patent 6,263,313; hereinafter referred to as "Milsted"). Claims 24 and 28 have been amended to address the rejection.

Based on the foregoing discussion regarding claims 23, 26 and 27, and since claims 24, 28, 31 and 34 depend from claims 23, 26 and 27, it is maintained that claims 24, 28, 31 and 34 should be allowable over Hedin.

Further, since Milsted merely discloses method and apparatus to create encoded digital content, to determine the genre of the music selected, and to allow browsing on a browser with list of titles and performers, it is maintained that Hedin and Milsted, in combination or individually, fail to teach or suggest generating a first contents list, in response to the input speech information, by calculating the similarity of acoustic characteristic quantities between first input speech information and preparation information of at least one category of content corresponding to the first input speech information of each content; transmitting input request information related to a category of content that is selected based on the result of calculating the variations of speech information of each category of content included in the first contents list; and using the selected category of content included in the first contents list when calculating the similarity if second input speech information is received (emphasis added). Therefore, claims 24, 28, 31 and 34 should be allowable over the combination of Hedin and Milsted.

Accordingly, it is submitted that the rejection of claims 24, 28, 31 and 34 based upon 35 U.S.C. §103(a) has been overcome by the present remarks and withdrawal thereof is respectfully requested.

§103 Rejection of Claims 29 and 32

In Section 8 of the Office Action, claims 29 and 32 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Hedin in view of Ranger *et al.* (U.S. Patent 5,999,940; hereinafter referred to as "Ranger"). This rejection is respectfully traversed below.

Based on the foregoing discussion regarding claims 23 and 26, and since claims 29 and 32 depend from one of claims 23 and 26, it is maintained that claims 29 and 32 should be allowable over Hedin.

Further, Ranger is cited for merely disclosing interactive information discovery tool and methodology, and for teaching “that ‘web server . . . performs a hit analysis of the query result’ and ‘predefine threshold parameter ‘N’ ‘indicates how many contents items must be present in order to trigger the automatic content analysis.’” *June 7, 2005 Office Action, page 9.* Therefore, it is maintained that Hedin and Milsted, in combination or individually, fail to teach or suggest generating a first contents list, in response to the input speech information, by calculating the similarity of acoustic characteristic quantities between first input speech information and preparation information of at least one category of content corresponding to the first input speech information of each content; transmitting input request information related to a category of content that is selected based on the result of calculating the variations of speech information of each category of content included in the first contents list; and using the selected category of content included in the first contents list when calculating the similarity if second input speech information is received (emphasis added). Therefore, claims 29 and 32 should be allowable over the combination of Hedin and Ranger.



Accordingly, it is submitted that the rejection of claims 29 and 32 based upon 35 U.S.C. §103(a) has been overcome by the present remarks and withdrawal thereof is respectfully requested.

### Conclusion

In view of the foregoing, entry of this amendment, and the allowance of this application with claims 2, 3, 6, 7, 9, 11 and 23-34 are respectfully solicited.

In regard to the claims amended herein and throughout the prosecution of this application, it is submitted that these claims, as originally presented, are patentably distinct over the prior art of record, and that these claims were in full compliance with the requirements of 35 U.S.C. §112. Changes that have been made to these claims were not made for the purpose of patentability within the meaning of 35 U.S.C. §§101, 102, 103 or 112. Rather, these changes were made simply for clarification and to round out the scope of protection to which Applicant is entitled.

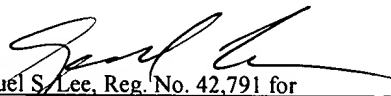
In the event that additional cooperation in this case may be helpful to complete its prosecution, the Examiner is cordially invited to contact Applicant's representative at the telephone number written below.

The Commissioner is hereby authorized to charge any insufficient fees or credit any overpayment associated with the above-identified application to Deposit Account 50-0320.

Respectfully submitted,

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